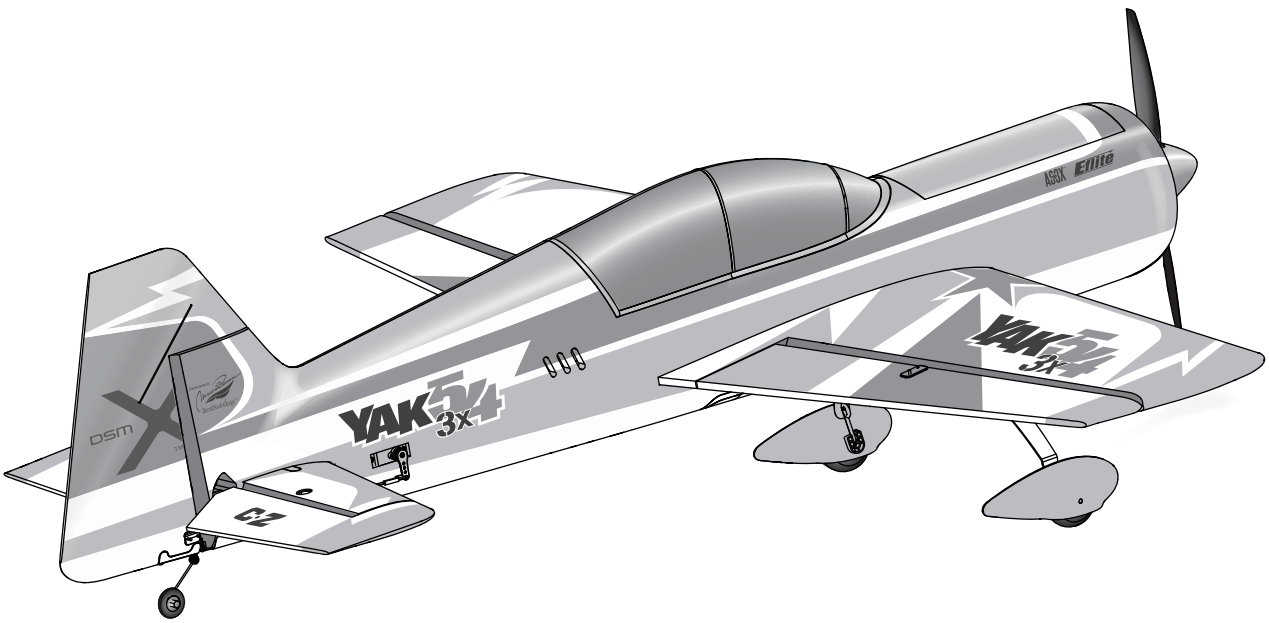
BNF BASIC PNP PLUG-N-PLAY

Carbon-Z® Yak 54 3X



Instruction Manual
Bedienungsanleitung
Manuel d'utilisation
Manuale di Istruzioni

AS3X®

CARBON Z STRUCTURE

E-flite®
ADVANCING ELECTRIC FLIGHT

NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, Inc. For up-to-date product literature, visit www.horizonhobby.com and click on the support tab for this product.

Meaning of Special Language:

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

NOTICE: Procedures, which if not properly followed, create a possibility of physical property damage AND little or no possibility of injury.

CAUTION: Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

WARNING: Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.

WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not use with incompatible components or alter this product in any way outside of the instructions provided by Horizon Hobby, Inc. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

Age Recommendation: Not for children under 14 years. This is not a toy.

Safety Precautions and Warnings

As the user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

- Always keep a safe distance in all directions around your airplanes to avoid collisions or injury. This airplanes is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control
- Always operate your airplanes in open spaces away from full-size vehicles, traffic and people.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the airplanes in your mouth as it could cause serious injury or even death.
- Never operate your airplanes with low transmitter batteries.
- Always keep aircraft in sight and under control.
- Always use fully charged batteries.
- Always keep transmitter powered on while aircraft is powered.
- Always remove batteries before disassembly.
- Always keep moving parts clean.
- Always keep parts dry.
- Always let parts cool after use before touching.
- Always remove batteries after use.
- Always ensure failsafe is properly set before flying.
- Never operate aircraft with damaged wiring.
- Never touch moving parts.

Charging Warnings

CAUTION: All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in a fire, personal injury, and/or property damage.

- By handling, charging or using the included Li-Po battery, you assume all risks associated with lithium batteries.
- If at any time the battery begins to balloon or swell, discontinue use immediately. If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.
- Always store the battery at room temperature in a dry area for best results.
- Always transport or temporarily store the battery in a temperature range of 40–120º F (5–49º C). Do not store battery or aircraft in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.
- Always charge batteries away from flammable materials.
- Always inspect the battery before charging and never charge dead or damaged batteries.
- Always disconnect the battery after charging, and let the charger cool between charges.
- Always constantly monitor the temperature of the battery pack while charging.
- ONLY USE A CHARGER SPECIFICALLY DESIGNED TO CHARGE LI-PO BATTERIES. Failure to charge the battery with a compatible charger may cause fire resulting in personal injury and/or property damage.
- Never discharge Li-Po cells to below 3V under load.
- Never cover warning labels with hook and loop strips.
- Never leave charging batteries unattended.
- Never charge batteries outside recommended levels.
- Never attempt to dismantle or alter the charger.
- Never allow minors under the age of 14 to charge battery packs.
- Never charge batteries in extremely hot or cold places (recommended between 40–120° F or 5–49° C) or place in direct sunlight.

WARNING AGAINST COUNTERFEIT PRODUCTS: If you ever need to replace your Spektrum receiver found in a Horizon Hobby product, always purchase from Horizon Hobby, Inc. or a Horizon Hobby authorized dealer to ensure authentic high-quality Spektrum product. Horizon Hobby, Inc. disclaims all support and warranty with regards, but not limited to, compatibility and performance of counterfeit products or products claiming compatibility with DSM or Spektrum.

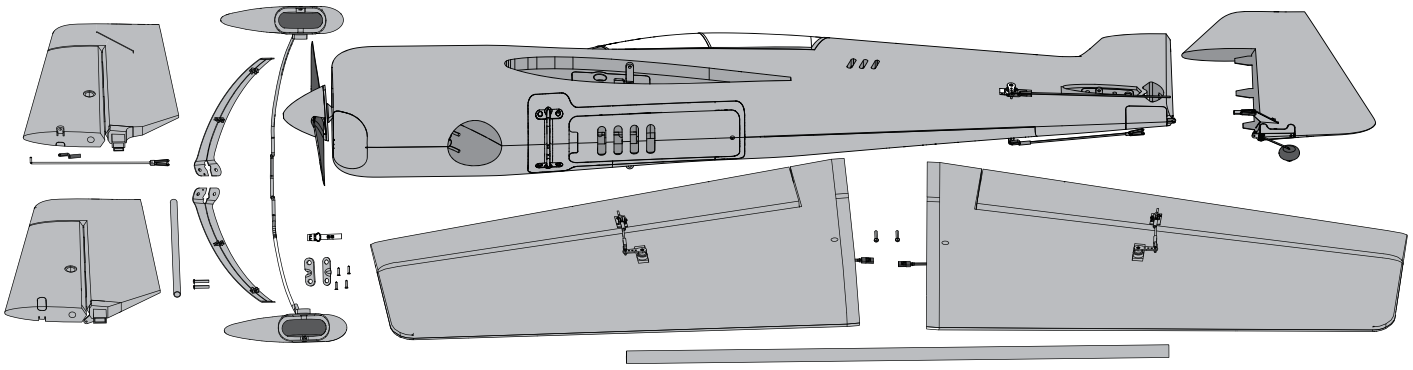
The E-flite® Carbon-Z® Yak 54 3X

Congratulations on your purchase of the E-flite® Carbon-Z® Yak 54 3X. Based on the groundbreaking original, the Carbon-Z Yak 54 3X is the next generation Carbon-Z Yak 54 that offers better performance and is an even more ideal "next step" for pilots looking to develop 3D proficiency skills. The entire airframe features strength enhancements that increase durability and the ability to withstand aggressive 3D maneuvers better than ever. Using the same E-flite 25-size outrunner motor, the 3X includes an upgraded ESC with a robust BEC so the complement of upgraded digital servos consistently deliver peak precision. The landing gear is now longer. Even its propeller has been refined to deliver greater efficiency and smoother power. Better still, included with the Bind-N-Fly® Basic version is the renowned Spektrum™ AR635 sport AS3X® receiver, which gives the Carbon-Z Yak 54 3X unmatched control agility and the stability to explore a new performance envelope that can help you fly like a pro.

A 4-channel, DSM2®/DSMX® compatible aircraft transmitter with dual rates and expo capability is recommended. Please be sure to charge the recommended E-flite 2800mAh 4S 14.8V 45C Li-Po (EFLB28004S30), included with the BNF Basic version with a dependable battery maintenance system such as the E-flite Celectra™ 80W AC/DC Multi-Chemistry Battery Charger (EFLC3025).

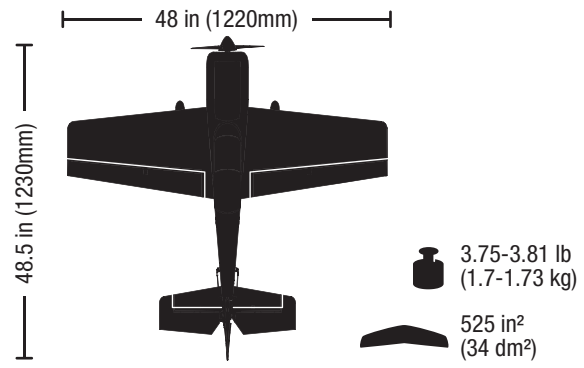
Please remember that every valuable moment you spend to understand and follow this manual means a greater potential for fun.

Box Contents



Specifications

		BNF BASIC	PNP PLUG-N-PLAY
	BL25 Brushless Outrunner Motor, 1000Kv	**Included**	**Included**
	60-Amp Pro Switch-Mode BEC Brushless ESC (V2)	**Installed**	**Installed**
	(4) 13g Digital Micro Servo (EFLR7155)	**Installed**	**Installed**
	Spektrum™ AR635, 6-Channel AS3X® Sport Receiver	**Installed**	**Required to Complete**
	Battery: 2800mAh 14.4V 4S 30C Li-Po (EFLB28004S30)	**Included***	**Required to Complete**
	Battery Charger: 6-cell Li-Po battery balancing charger	**Required to Complete**	**Required to Complete**
	Recommended Transmitter: Full-Range 6 channel 2.4GHz with Spektrum DSM2®/DSMX® technology with adjustable Dual Rates.	**Required to Complete**	**Required to Complete**



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To register your product online, visit www.e-fliterc.com

AS3X System

Horizon Hobby has always made RC sport, scale and unique aircraft with the kind of performance experts appreciate. First used in Blade® ultra micro flybarless helicopters, MEMS sensor technology within the Artificial Stability 3-axis (AS3X) System has been specifically tuned for airplanes to help invisibly correct for turbulence, torque and tip stalls.

The precision and performance available from AS3X equipped ultra micro airplanes has heralded a new era of performance, and with the AR635, that performance is introduced for larger airplanes.

The outstanding control agility delivers an ultra smooth, locked-in feel that obeys your every command with performance that's natural feeling. It's so gratifying, in fact, that it's as though you're the RC pilot of an expertly tuned, giant-scale aircraft. Welcome to AS3X, your parkflyer will never be the same! To see what we mean, go to www.E-fliteRC.com/AS3X.

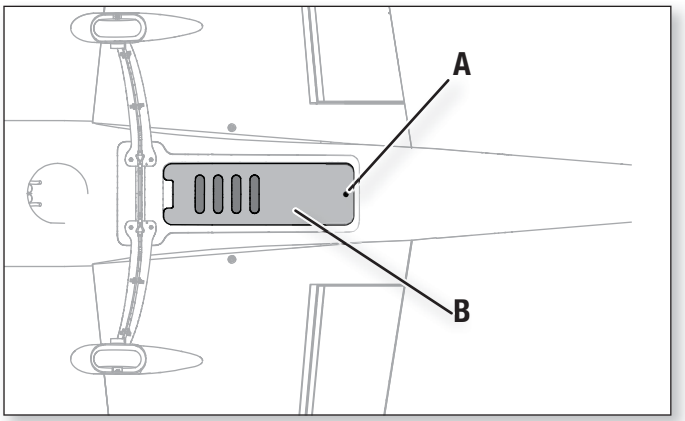
PNP PLUG-N-PLAY®

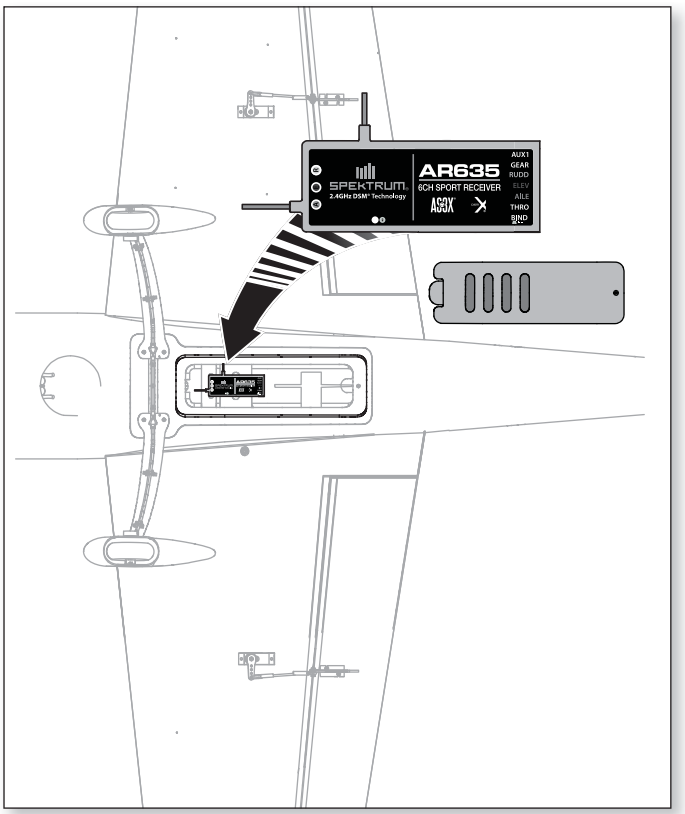
Receiver Selection and Installation

The Spektrum AR635 receiver is recommended for ths airplane. If you choose to install another receiver, ensure that it is at least a 6-channel full range (sport) receiver. Refer to your receiver manual for correct installation and operation instructions.

Installation (AR635 shown)

1. Remove the screw (**A**) and radio hatch (**B**) from the bottom of the fuselage.
2. Install your full range (sport) receiver in the fuselage using double-sided servo tape.
3. Attach the elevator and rudder servo connectors to the appropriate channels of the receiver.
4. Attach the aileron Y-harness to the aileron channel of the receiver.
5. Attach the ESC connector to the throttle channel of the receiver.





Transmitter and Receiver Binding

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Binding is the process of programming the receiver to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. You need to 'bind' your chosen Spektrum™ DSM2®/DSMX® technology equipped aircraft transmitter to the receiver for proper operation.
Please visit www.bindnfly.com for a complete list of compatible transmitters.

CAUTION: When using a Futaba® transmitter with a Spektrum DSM module, you must reverse the throttle channel and rebind. Refer to your Spektrum module manual for binding and failsafe instructions. Refer to your Futaba transmitter manual for instructions on reversing the throttle channel.

Read the transmitter instructions for binding to a receiver (location of transmitter's Bind control).	
1.	Make sure the transmitter is powered off.
2.	Move the transmitter controls to neutral (flight controls: rudder, elevators and ailerons) or to low positions (throttle, throttle trim).**
3.	Install a bind plug in the receiver bind port.
4.	Connect the flight battery to the ESC, then power on the ESC switch. The ESC will produce a series of sounds. One long tone, then 6 short tones confirm that the LVC is set correctly for the ESC. The orange bind LED on the receiver will begin to flash rapidly.
5.	Power on the transmitter while holding the transmitter bind button or switch. Refer to your transmitter's manual for binding.
6.	When the receiver binds to the transmitter, the orange bind light on the receiver will turn solid and the ESC will produce a series of three ascending tones. The tones indicate the ESC is armed, provided the throttle stick and throttle trim are low enough to trigger arming.
7.	After binding, the 3 LEDs (blue, yellow and red) on the receiver will flash. The flashing indicates the gain setting for each axis. For more information, refer to the "Initializing the AR635" section in the receiver manual.
8.	Remove the bind plug from the bind port.
9.	Safely store the bind plug (some owners attach the bind plug to their transmitter using two-part loops and clips).
10.	The receiver should retain the binding instructions received from the transmitter until another binding is done.

Bind Plug Installation

** The throttle will not arm if the transmitter's throttle control is not put at the lowest position. If you encounter problems, follow the binding instructions and refer to the transmitter Troubleshooting Guide for other instructions. If needed, contact the appropriate Horizon Product Support office.

Battery Installation

Battery Selection

- We recommend the E-flite 2800mAh 14.8V 4S 30C Li-Po battery (EFLB28004S30). Refer to the Optional Parts List for other E-flite batteries. If using a battery other than those listed, the battery should be within the range of capacity, dimensions and weight of the E-flite Li-Po battery packs to fit in the fuselage. Be sure the model balances at the recommended CG.

1. Carefully lift the rear edge of the battery hatch, then pull the hatch up and back from the fuselage.

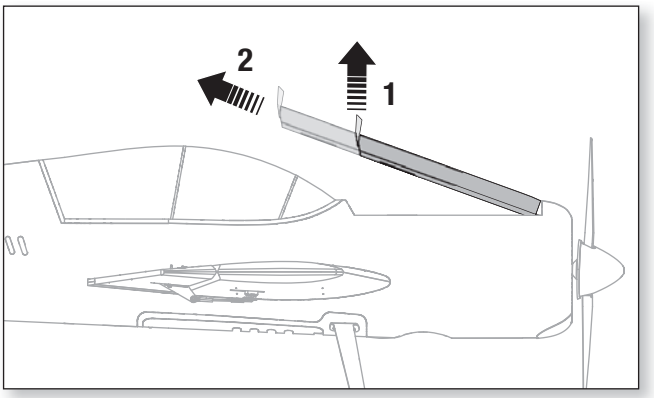
2. Apply hook and loop tape to the bottom of your battery.

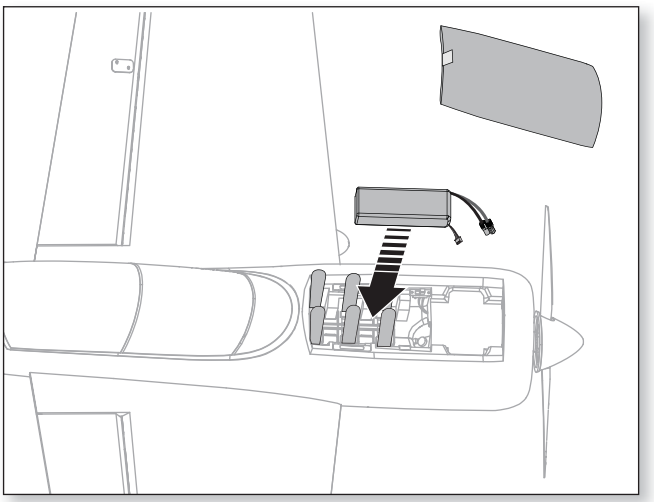
3. For the recommended CG, install the battery in the middle of the compartment, then press the battery onto the hook and loop strip. Close the 3 hook and loop straps around the battery. *See the Adjusting the Center of Gravity instructions for more information.*

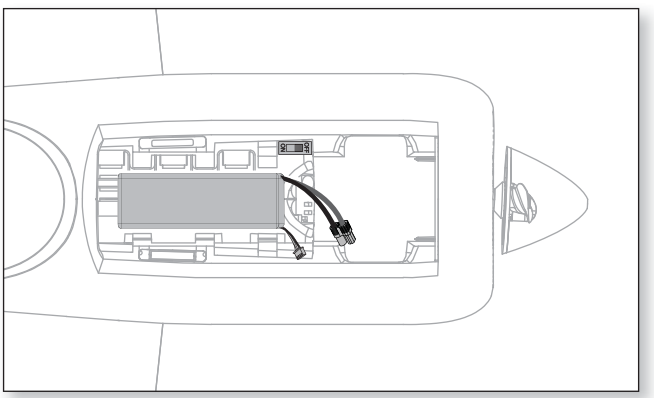
4. Connect a fully charged battery to the ESC. *See the Arming the ESC instructions for correct connection of the battery to the ESC.*

5. Reinstall the battery hatch.

Tip: The ESC switch in the front left corner of the battery compartment must be powered on for Arming the ESC.







Low Voltage Cutoff (LVC)

When a Li-Po battery is discharged below 3V per cell, it will not hold a charge. The ESC protects the flight battery from over-discharge using Low Voltage Cutoff (LVC). Before the battery charge decreases too much, LVC removes power supplied to the motor. Power to the motor pulses, showing that some battery power is reserved for flight control and safe landing. When the motor pulses, land the aircraft immediately and recharge the flight battery.

Disconnect and remove the Li-Po battery from the aircraft after use to prevent trickle discharge. Charge your Li-Po battery to about half capacity before storage. During storage, make sure the battery charge does not fall below 3V per cell.

TIP: Monitor your aircraft battery's voltage before and after flying by using a Li-Po Cell Voltage Checker (EFLA111, sold separately).

Arming the ESC and Receiver

Arming the ESC also occurs after binding as previously described, but subsequent connection of a flight battery requires the steps below.

AS3X
The AS3X system will not activate until the throttle stick or trim is increased for the first time. Once the AS3X is active, the control surfaces may move rapidly on the aircraft. This is normal. AS3X will remain active until the battery is disconnected.

NOTICE: Due to increased servo power demands, only use the 60-Amp Pro Switch-Mode BEC Brushless ESC (EFLA1060B V2) with the AR635 receiver. Use of any other ESC presently available may result in damage to the aircraft.

DO NOT connect the battery while the throttle stick is at full or the ESC will go into programming mode. If a musical tone sounds after 5 seconds, immediately disconnect the battery, then lower the throttle. Refer to the ESC manual (available separately) for more information.

⚠ **CAUTION:** Always keep hands away from the propeller. When armed, the motor will turn the propeller in response to any throttle movement.

⚠ **CAUTION:** Always disconnect the Li-Po battery from the aircraft receiver when not flying to avoid over-discharging the battery. Batteries discharged to a voltage lower than the lowest approved voltage may become damaged, resulting in loss of performance and potential fire when batteries are charged.

1. Lower the throttle and throttle trim to the lowest settings. Power on the Transmitter, then wait 5 seconds.

2. Remove the battery hatch and install the flight battery to the hook and loop strip, then connect the battery to the ESC, noting proper polarity.

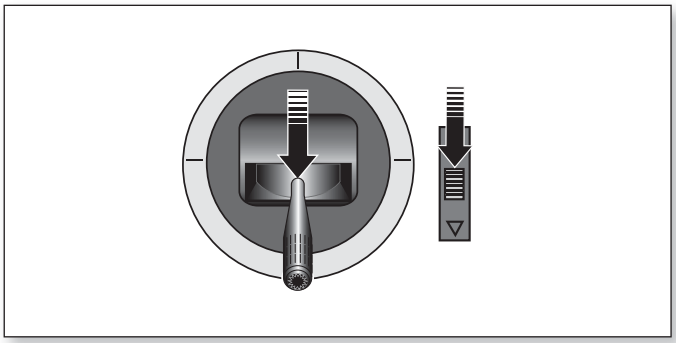
3. Power ON the ESC switch (**A**) on the left side of the battery compartment. Keep the aircraft immobile on its wheels away from wind for 5 seconds.

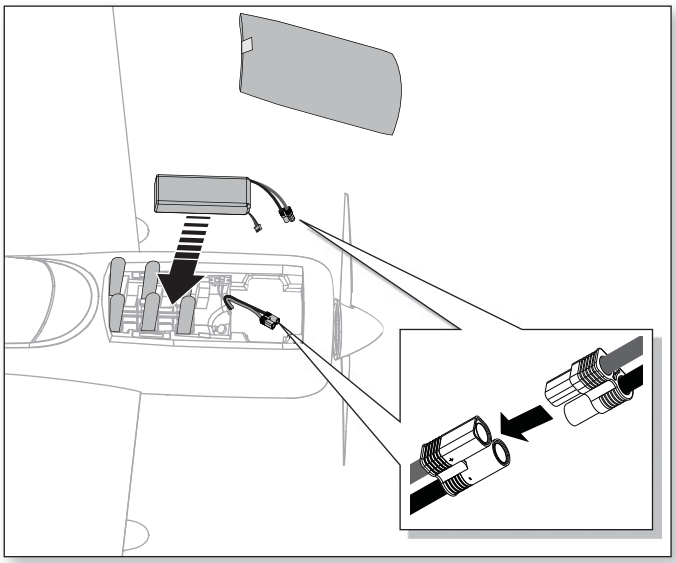
   - **The ESC will sound a series of tones (refer to step 4 of the binding instructions for more information).**
   - **An LED will light on the receiver (the red, blue and green gain LEDs will also flash).**

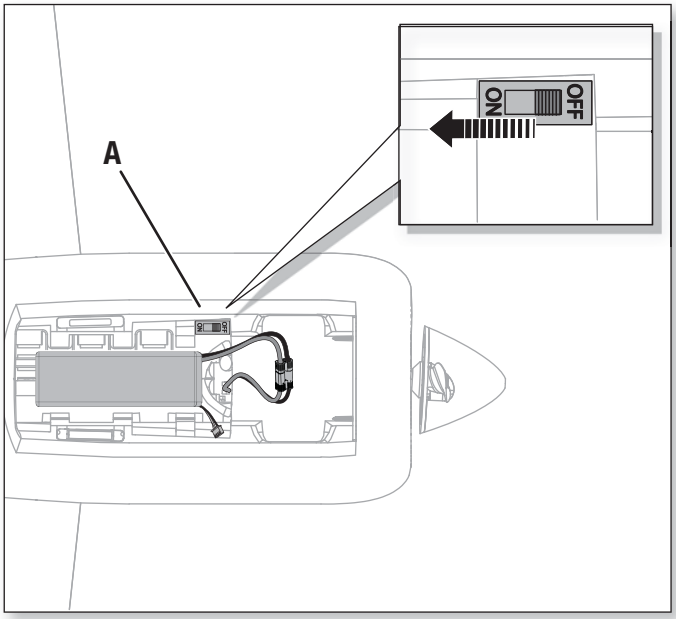
   If the ESC sounds a continuous double beep after the flight battery is connected, recharge or replace the battery.

For further explanation of the gain lights, refer to the “Initializing the AR635” section of the AR635 receiver manual.

TIP: The ESC switch enables you to easily disarm the propeller while you are not flying, but will still draw current from the battery.







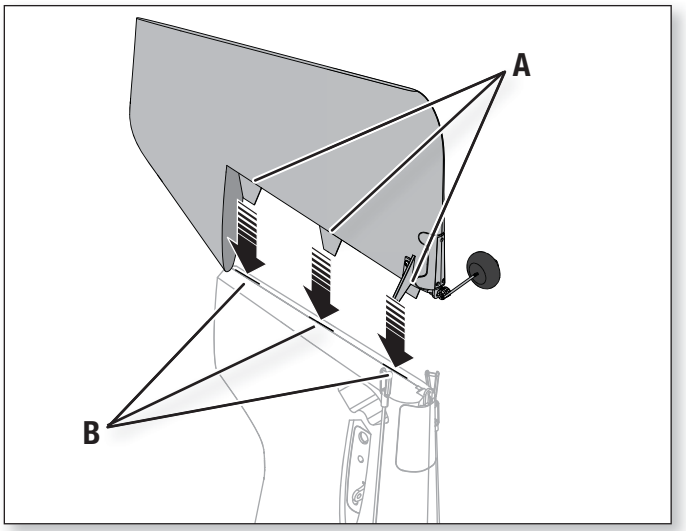
Rudder Installation

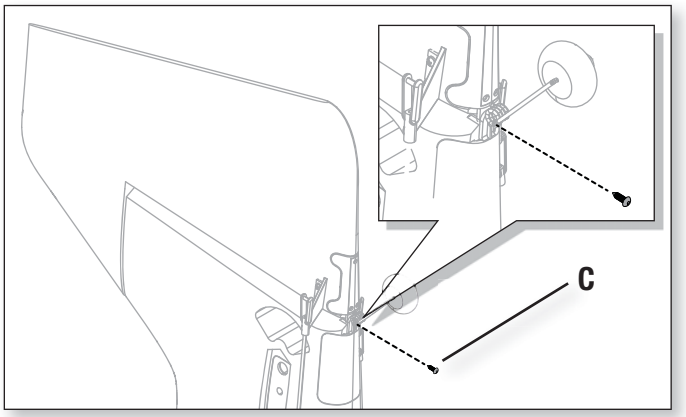
Required Adhesives:

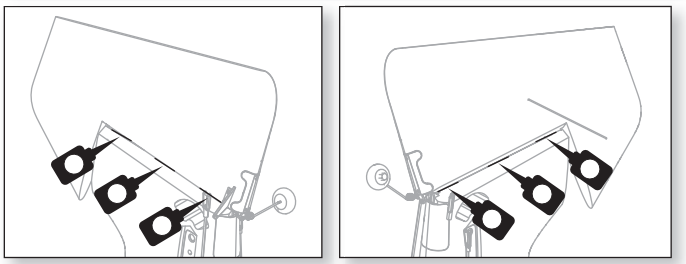
Thin CA

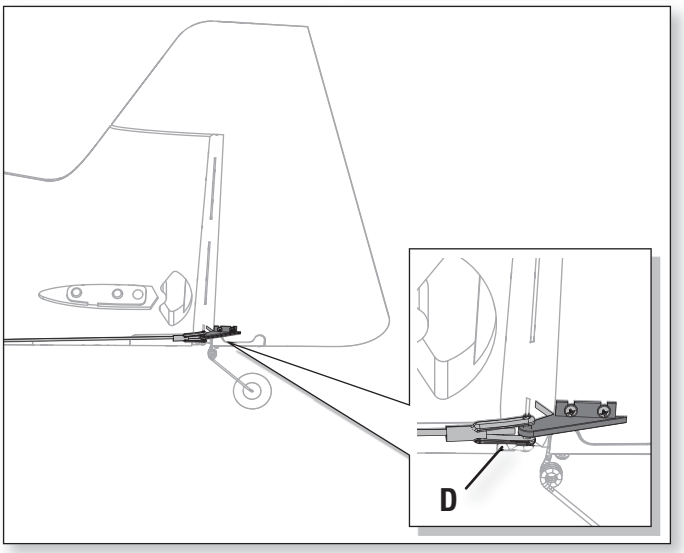
Assembly

1. Slide the rudder's CA hinges (**A**) in the hinge slots (**B**) of the vertical tail.
2. Install the screw (**C**) in the rudder mount.
3. Rest the aircraft on its nose, holding the tail up so the thin CA (cyanoacrylate adhesive) will flow into the slots.
4. Bend the hinges by turning the rudder left, then carefully apply thin CA to each hinge in the right side of each slot.
5. When the CA is dry, turn the rudder to the right and apply CA in the left side of each slot.
6. Connect the clevis (**D**) to the rudder control horn. Ensure the rudder servo arm is in the correct position, then adjust the linkage to center the rudder.







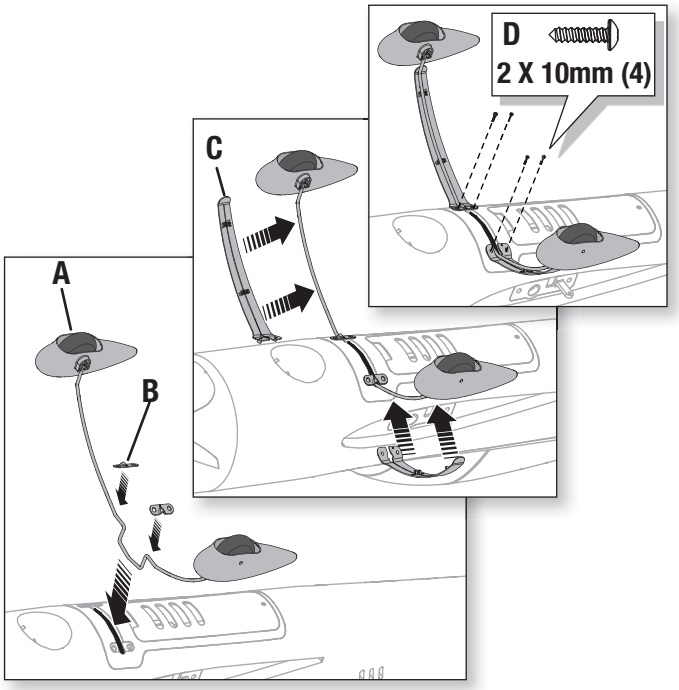


Landing Gear Installation

1. Install the landing gear (**A**) with the wheel pants pointed to the rear as shown.
2. Install the covers (**B**, marked L and R) on the strut and fuselage.
3. Install the fairings (**C**, marked L and R) on the fuselage using 4 screws (**D**).

When needed, disassemble in reverse order.

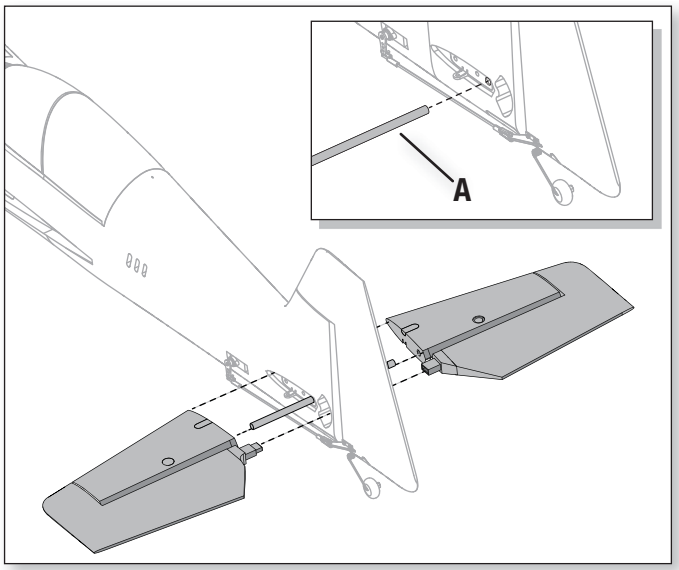
Tip: Carefully support the aircraft while installing or removing screws.

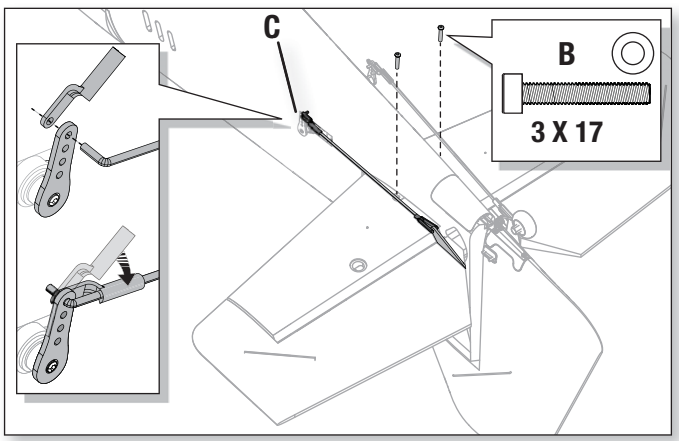


Horizontal Tail Installation

1. Slide the horizontal tail tube (**A**) into the hole in the rear of the fuselage.
2. Install the 2 piece (left and right) horizontal tail as shown. Ensure the control horn faces down.
3. Install 2 screws (**B**) in the holes in the bottom of the horizontal tail.
4. Attach the linkage (**C**) to the outermost hole in the elevator servo arm using the link keeper and to the elevator control horn using the clevis.
5. Ensure the elevator servo arm is in the correct position, then adjust the linkage to center the elevator.

When needed, disassemble in reverse order.





Wing Installation

1. Slide the wing tube (**A**) into the fuselage.

⚠ **CAUTION:** DO NOT crush or otherwise damage the wiring when attaching the wing to the fuselage.

2. Install the left and right wing (**B and C**) over the wing tube and into the wing slot of the fuselage while inserting the aileron servo connectors through the provided holes.

3. Invert the fuselage so the landing gear is facing up. Secure the left and right wings to the fuselage using the included screws (**D**).

4. Remove the screw (**E**) and the receiver cover (**F**) from the bottom of the fuselage.

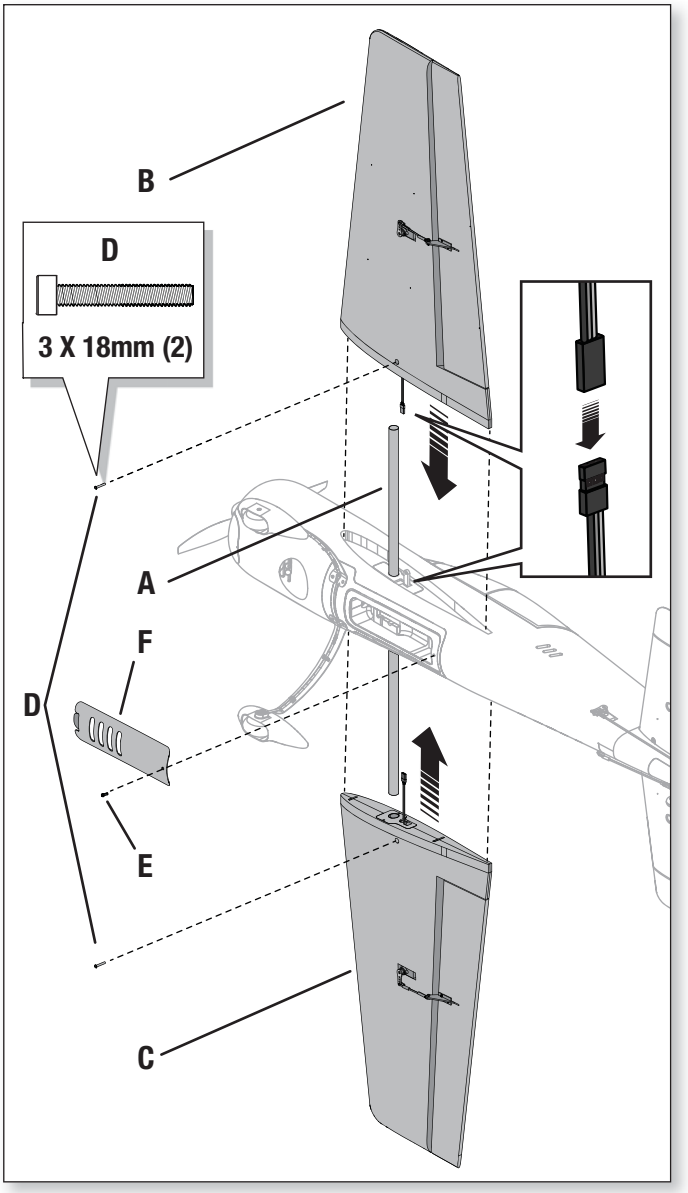
Tip: If needed, use hemostats or pliers to pull the servo connectors into the fuselage.

5. Connect the aileron servos from the wings to the Y-harness connectors in the fuselage. The left and right aileron servos can be connected to either side of the Y-harness.

6. Replace the receiver cover and the screw.

Disassemble in reverse order.

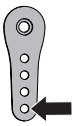
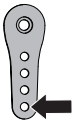
IMPORTANT: Correct operation of the AS3X system requires connection of both ailerons to the included Y-harness and the AILE channel of the receiver.



Servo Arm Settings

Fly the model at recommended settings before making changes.
The linkages installed at the factory position are chosen for the most balanced aerobatic response and AS3X performance. Linkage connections directly affect aircraft response and AS3X performance.

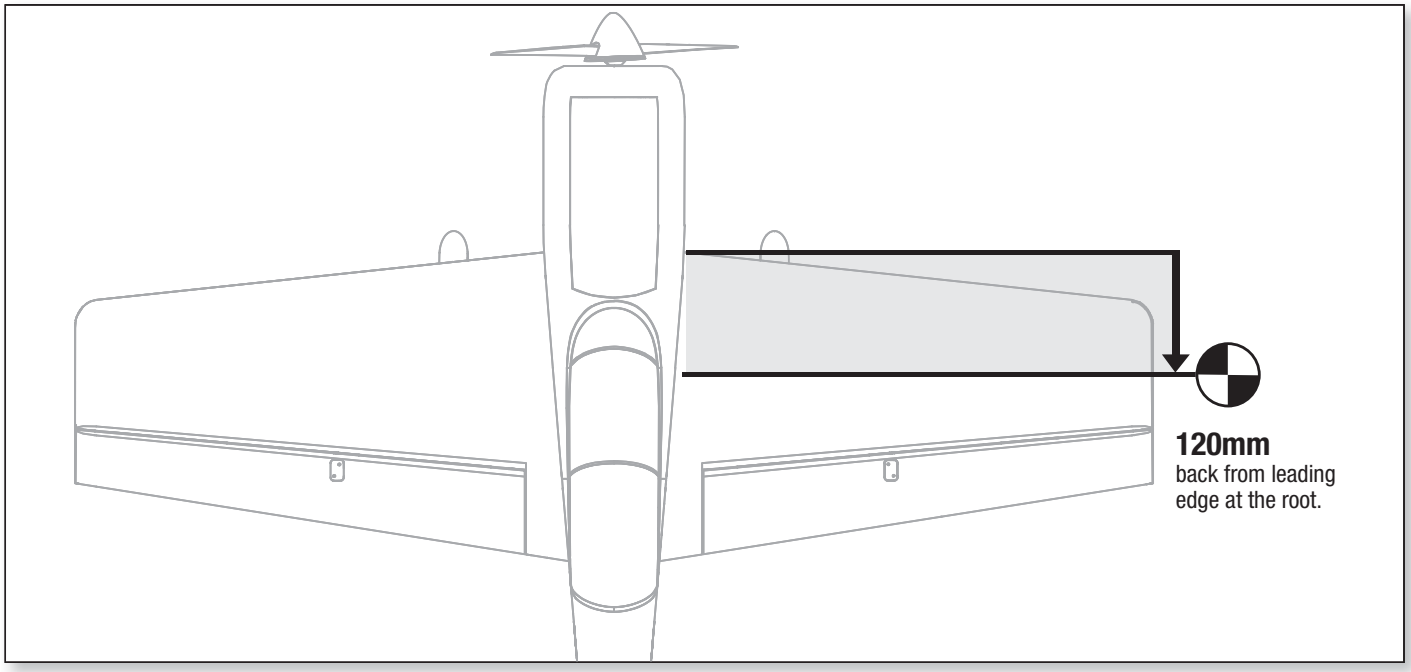
NOTICE: Moving a linkage to another position may block the servo arm or affect AS3X functionality. Refer to the receiver instructions for more information about AS3X functionality.

	Arms
Elevator	
Rudder	
Ailerons	

Center of Gravity (CG)

The CG location is measured from the leading edge of the wing at the root. This CG location has been determined with the recommended Li-Po battery (EFLB28004S30) installed in the middle of the battery compartment.

Tip: You can fly your aircraft inverted to confirm the CG is correct. The aircraft should fly level when flying inverted at ¾ throttle with little or no elevator down pressure. If the aircraft CG is too far forward (nose-heavy), significant down elevator is required to fly level. If the aircraft CG is too far aft (tail-heavy), up elevator is required to fly level.



Control Direction Test

Move the controls on the transmitter to make sure the aircraft control surfaces move correctly and in the proper direction or reverse a servo.

After performing the Control Test, correctly set the failsafe. Make sure the transmitter controls are at neutral and the throttle and throttle trim are in the low position, then rebind the airplanes to your transmitter. If the receiver loses its connection to the transmitter, the failsafe will drive the servos to the settings made at binding.

IMPORTANT: In your transmitter, ensure the Channel 5 servo is in NORMAL position for proper AS3X functionality.

Control Surface Centering

IMPORTANT: Perform the Control Direction Test before performing control surface centering.

Control Surface Centering and Adjusting a Linkage

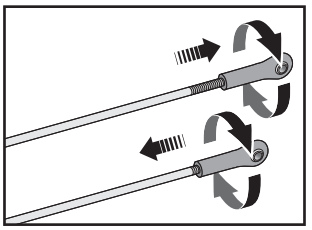
While AS3X is inactive (before advancing the throttle), mechanically center the control surfaces.

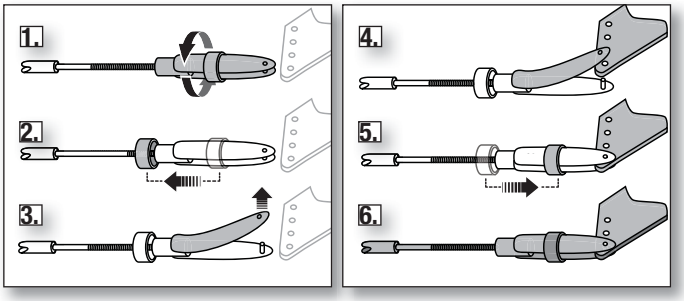
IMPORTANT: Correct operation of the AS3X system requires sub-trim and trim at 0.

After binding a transmitter to the airplanes receiver, set the trims and sub-trims to 0, ensure the servo arms are in the correct positions, then adjust the linkages to center the control surfaces.

Tip: Use needle-nose pliers or ball link pliers (RV01005) to remove or install a link on a control horn.

- Turn the linkage clockwise or counterclockwise until the control surface is centered.
- Attach the linkage to the servo arm or control horn after adjustment.





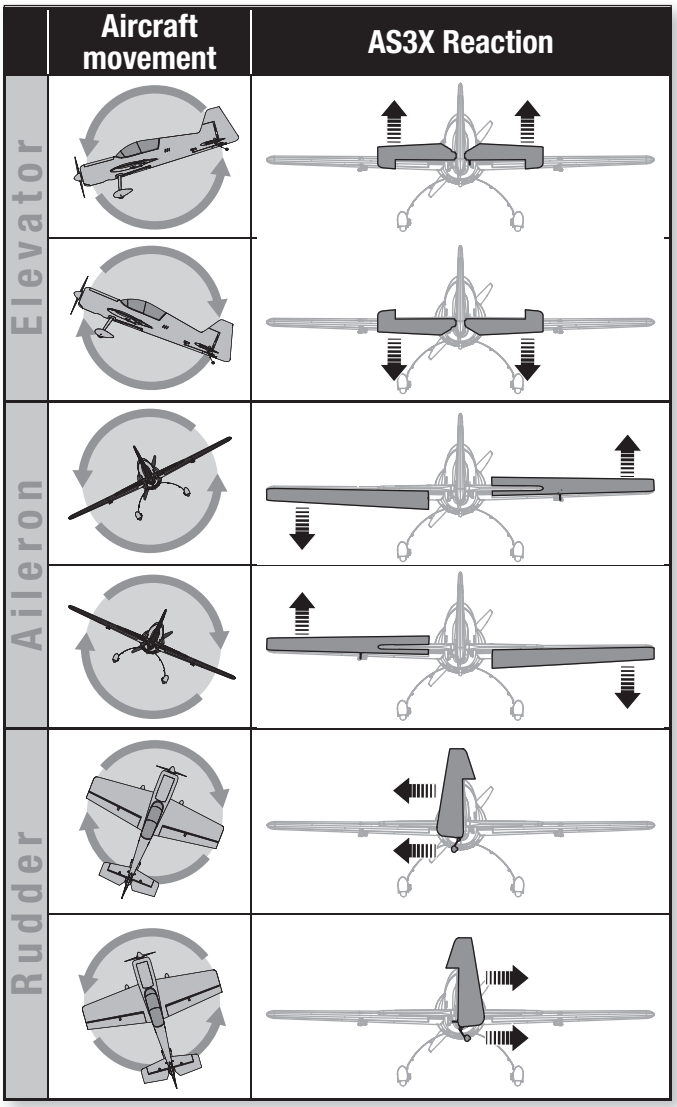
AS3X Control Direction Test

Assemble the aircraft and bind your transmitter to the receiver before performing this Test.

Activate the AS3X system by advancing the throttle to 25%, then fully lowering the throttle.

Move the aircraft as shown to ensure the AS3X system moves the control surfaces in their proper direction. If the control surfaces do not respond as shown, do not fly the aircraft. Refer to the receiver manual for more information.

Once the AS3X system is active, the control surfaces may move rapidly on the aircraft. This is normal. AS3X will remain active until the battery is disconnected.



Transmitter Setup

IMPORTANT: The AR635 receiver's default setting in this aircraft is normal mode. We recommend that you do not change this setup. Refer to the receiver manual for more information.

A programmable DSM2/DSMX six-channel (or better) transmitter with Dual Rates is required for flying this aircraft. The Spektrum™ DX6i, DX7s, DX8, DX9, DX10t, DX18 and JR® X9503, 11X or 12X transmitters may be used.

Below are the recommended settings for Servo Travel.

Throttle	100%
Aileron	125%
Elevator	125%
Rudder	125%
Channel 5	100%

✓	Transmitter Setup Checklist
Before binding for Computerized Transmitters (DX6i, DX7/DX7se, DX7s, DX8, DX9, DX10t, DX18):	
	1. Choose a blank model memory.
	2. Choose Wing/Aircraft Type for single aileron servo.
	3. Set all trim and sub-trims to NEUTRAL (0%).
	4. Set servo travel values to the recommended settings.
	5. Set the Dual Rate value according to the Dual Rate and Expo chart.
After binding:	
	1. DO NOT use sub-trims to make fine adjustments. Off-center subtrim will affect servo travel and AS3X operation.
	2. Adjust linkage lengths so the control surfaces center when the servo arm is close to perpendicular
⚠	**CAUTION:** For safe operation, always re-bind the airplane after setup is complete to ensure the failsafe is updated with the latest setup.

Dual Rates and Expos

Adjust rate and expo to the recommended values shown in the chart.

NOTICE: To ensure AS3X functions properly, do not lower rate values below 50%. If lower rates are desired, manually adjust the position of the pushrods on the servo arm.

NOTICE: If oscillation occurs at high speed, refer to the Troubleshooting Guide for more information.

Dual Rate	High Rate	Expo	Low Rate	Expo
Aileron	70mm ▲/▼	10%	37mm ▲/▼	45%
Elevator	75mm ▲/▼	10%	19mm ▲/▼	40%
Rudder	110mm ◀/▶	10%	65mm ◀/▶	40%

Preflight Preparation

1. Remove and inspect contents.
2. Charge flight battery.
3. Read this instruction manual thoroughly.
4. Fully assemble airplanes.
5. Install the flight battery in the aircraft (once it has been fully charged).
6. Check the Center of Gravity (CG)
7. Bind aircraft to your transmitter.
8. Make sure linkages move freely.
9. Perform the Control Direction Test with the transmitter.
10. Perform the AS3X Control Direction Test with the aircraft.
11. Adjust flight controls and transmitter.
12. Perform a radio system Range Check.
13. Find a safe and open area.
14. Plan flight for flying field conditions.

Flying Tips and Repairs

Consult local laws and ordinances before choosing a flying location.

Flying Field

Always choose a wide-open space for flying your aircraft. It is ideal for you to fly at a sanctioned flying field. If you are not flying at an approved site, always avoid flying near houses, trees, wires and buildings. You should also be careful to avoid flying in areas where there are many people, such as busy parks, schoolyards, or soccer fields.

Range Check your Radio System

Before you fly, range check the radio system. Refer to your specific transmitter instruction manual for range test information.

Oscillation

Once the AS3X system is active (after advancing the throttle for the first time), you will normally see the control surfaces react to aircraft movement. In some flight conditions, you will see oscillation. If oscillation occurs, decrease airspeed. If oscillation persists, refer to the Troubleshooting Guide for more information.

Takeoff

Place the aircraft in position for takeoff (facing into the wind). Set your transmitter in low rate and gradually increase the throttle to ¾ to full and steer with the rudder. Pull back gently on the elevator and climb to a comfortable altitude.

Flying

Fly the airplane and trim it for level flight at ¾ throttle. After landing, adjust the linkages mechanically to account for trim changes, then reset the trims to neutral. Before changing flight modes, ensure the aircraft will fly straight and level with no trim or sub-trim.

Tip: If using more than 8 clicks of flight trim, mechanically adjust the linkage so less trim is needed, or AS3X operation may be affected.

This aircraft is extremely responsive to control input. Fly in General Flight mode (Channel 5, position 0) until you are familiar with the aircraft's response. Fly first attempts in 3D mode at high altitude and slow speeds.

General Flight and 3D Flight

The receiver's default gain settings for General Flight and 3D modes are set at the factory for safe and reliable performance.

⚠ **CAUTION:** Flying in level forward flight and calm wind conditions above 1/2 throttle in 3D mode or long high-speed dives may result in strong oscillation that can damage the aircraft.

If there is oscillation in either mode (General Flight or 3D), decrease throttle immediately. If oscillation persists, refer to the Troubleshooting Guide to adjust (decrease) the axis gain to stop oscillation. For additional instructions on changing the gain settings, refer to the receiver manual.

Landing

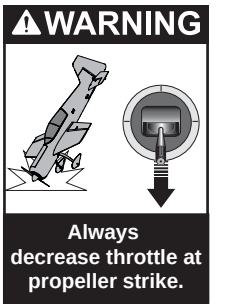
For your first flights and with the recommended battery pack (EFLB28004S30), set your transmitter timer or a stopwatch to 4 minutes. Adjust your timer for longer or shorter flights once you have flown the model. When the motor pulses, land the aircraft immediately and recharge the flight battery. It is not recommended to fly the battery to LVC.

Make sure to land into the wind. Fly the aircraft to approximately 36 inches (90 cm) or less above the runway, using a small amount of throttle for the entire descent. Keep the throttle on until the aircraft is ready to flare. During flare, keep the wings level and the aircraft pointed into the wind. Gently lower the throttle while pulling back on the elevator to bring the aircraft down on its wheels.

NOTICE: If a crash is imminent, reduce the throttle and trim fully. Failure to do so could result in extra damage to the airframe, as well as damage to the ESC and motor.

NOTICE: After any impact, always ensure the receiver is secure in the fuselage. If you replace the receiver, install the new receiver in the same orientation as the original receiver or damage may result.

NOTICE: Crash damage is not covered under warranty.



NOTICE: When you are finished flying, never leave the aircraft in direct sunlight or in a hot, enclosed area such as a car. Doing so can damage the foam.

Repairs

Thanks to the Z-Foam™ material in this aircraft, repairs to the foam can be made using virtually any adhesive (hot glue, regular CA, epoxy, etc). When parts are not repairable, see the Replacement Parts List for ordering by item number. For a listing of all replacement and optional parts, refer to the list at the end of this manual.

NOTICE: Use of CA accelerant on your aircraft can damage paint. DO NOT handle the aircraft until accelerant fully dries.

Power Component Service

CAUTION: Always disconnect the flight battery before performing motor service.

CAUTION: DO NOT handle the propeller, motor or ESC while the flight battery is connected to the ESC. Personal injury could result.

Disassembly

1. Disconnect the flight battery before performing motor service.
2. Remove the screw (**A**) and spinner (**B**) from the collet (**G**).
3. Remove the spinner nut (**C**), propeller (**D**), spinner backplate (**E**), backplate (**F**) and collet from the motor shaft. You will need a tool to turn the spinner nut.
4. Remove the 4 screws (**H**) from the X-mount (**I**) and the fuselage.
5. Disconnect the motor wires from the ESC wires.
6. Remove the 4 screws (**J**) and motor (**K**) from the X-mount.

Assembly

Assemble in reverse order.

- Correctly align and connect the motor wire colors with the ESC wires.
- The propeller size numbers (12 X 5.25 V2) must face out from the motor for correct propeller operation.
- A tool is required to tighten the spinner nut on the collet.
- Ensure the spinner is fully connected to the spinner backplate for safe operation.

Propeller Maintenance

CAUTION: Always keep hands away from the propeller when a battery is connected to the aircraft. When armed, the motor will turn the propeller in response to any throttle stick movement. Always disconnect the battery from the aircraft before handling the propeller.

- Follow steps 2 and 3 above to remove the propeller.
- Reassemble in reverse order.
- Ensure the propeller size numbers face toward the front of the aircraft. Ensure the nut holds the propeller tightly without damaging the propeller.

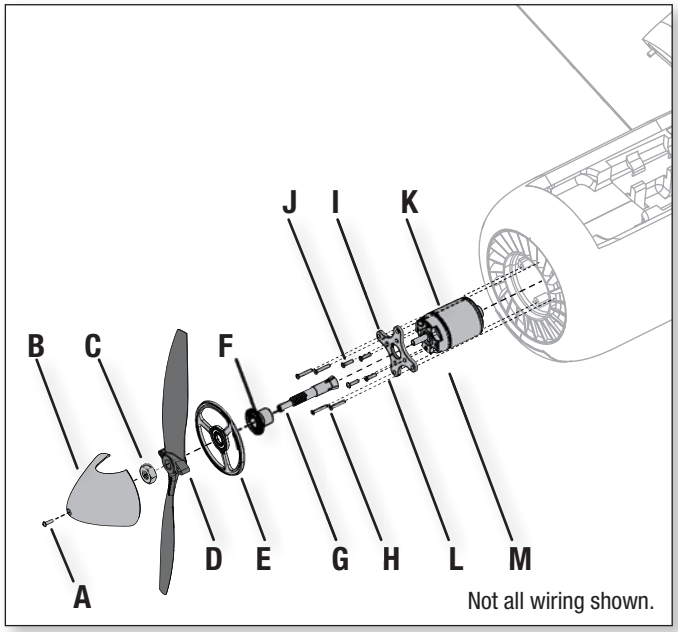
NOTICE: If the propeller is not balanced, the aircraft may vibrate, causing the stabilization system to not operate correctly and/or decrease the life of the servos.

Horizon Hobby does not warrant replacement if the servos are used under extreme vibration or the stabilization system is used with an unbalanced propeller.

For more information, view John Redman's propeller balancing video at www.horizonhobby.com.

Tip: We recommend removal of the propeller before any radio system setup or transport of your aircraft.

Tip: When replacing servos, we recommend tying a string to the servo wire before removing the servo. This string allows you to easily reinstall the servo and wire.



AMA National Model Aircraft Safety Code

Effective January 1, 2011

A. GENERAL

A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. It may not exceed limitations of this code and is intended exclusively for sport, recreation and/or competition. All model flights must be conducted in accordance with this safety code and any additional rules specific to the flying site.

1. Model aircraft will not be flown:
   (a) In a careless or reckless manner.
   (b) At a location where model aircraft activities are prohibited.

2. Model aircraft pilots will:
   (a) Yield the right of way to all man carrying aircraft.
   (b) See and avoid all aircraft and a spotter must be used when appropriate. (AMA Document #540-D-See and Avoid Guidance.)
   (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport, without notifying the airport operator.
   (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
   (e) Not exceed a takeoff weight, including fuel, of 55 pounds unless in compliance with the AMA Large Model Aircraft program. (AMA Document 520-A)
   (f) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft. (This does not apply to model aircraft flown indoors).
   (g) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
   (h) Not operate model aircraft while under the influence of alcohol or while using any drug which could adversely affect the pilot's ability to safely control the model.
   (i) Not operate model aircraft carrying pyrotechnic devices which explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property.
   Exceptions:
   - Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
   - Rocket motors (using solid propellant) up to a G-series size may be used provided they remain attached to the model during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code but may not be launched from model aircraft.
   - Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document (AMA Document #718).

   (j) Not operate a turbine-powered aircraft, unless in compliance with the AMA turbine regulations. (AMA Document #510-A).

3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:
   (a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event.
   (b) An inexperienced pilot is assisted by an experienced pilot.

4. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

B. RADIO CONTROL

1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.

2. A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.

3. At all flying sites a safety line(s) must be established in front of which all flying takes place (AMA Document #706-Recommended Field Layout):
   (a) Only personnel associated with flying the model aircraft are allowed at or in front of the safety line.
   (b) At air shows or demonstrations, a straight safety line must be established.
   (c) An area away from the safety line must be maintained for spectators.
   (d) Intentional flying behind the safety line is prohibited.

4. RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.

5. RC model aircraft will not operate within three (3) miles of any pre-existing flying site without a frequency-management agreement (AMA Documents #922-Testing for RF Interference; #923- Frequency Management Agreement)

6. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flight line.

7. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual. This does not apply to model aircraft flown indoors.

8. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times.

9. The pilot of a RC model aircraft shall:
   (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
   (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.

FAA Information

Prior to flying, contact your local or regional modeling organizations for guidance and familiarize yourself with the current local rules and FAA regulations governing model aviation in your location.

More information about model aviation can be found at www.modelaircraft.org. The Federal Aviation Administration can be found online at www.faa.gov.

Troubleshooting Guide AS3X

Problem	Possible Cause	Solution
Oscillation	Flying over recommended airspeed	Reduce air speed
	Damaged propeller or spinner	Replace propeller or spinner
	Imbalanced propeller	Balance the propeller. For more information, view John Redman's propeller balancing video at www.horizonhobby.com
	Flight condition variations	Adjust gain to current flight conditions (wind, updrafts, local conditions [elevation, humidity, temperature, etc.])
	Motor vibration	Replace parts or correctly align all parts and tighten fasteners as needed
	Loose receiver	Align and secure receiver in fuselage
	Loose aircraft controls	Tighten or otherwise secure parts (servo, arm, linkage, horn and control surface)
	Worn parts	Replace worn parts (especially propeller, pivot points or servo)
	Irregular servo movement	Replace servo
	If oscillation persists...	Decrease gain (refer to receiver manual)
Inconsistent flight performance	Trim is not at neutral	If you adjust trim more than 8 clicks, adjust the clevis to remove trim
	Sub-Trim is not at neutral	No Sub-Trim is allowed. Adjust the servo linkage
	Aircraft was not kept immobile for 5 seconds	Power off and on the ESC while keeping the aircraft still for 5 seconds with throttle stick in lowest position.
Incorrect response to the AS3X Control Direction Test	Incorrect direction settings in the receiver, which can cause a crash	DO NOT fly. Correct the direction settings (refer to the receiver manual), then fly.

Troubleshooting Guide

Problem	Possible Cause	Solution
Aircraft will not respond to throttle but responds to other controls	Throttle not at idle and/or throttle trim too high	Reset controls with throttle stick and throttle trim at lowest setting
	Throttle servo travel is lower than 100%	Make sure throttle servo travel is 100% or greater
	Throttle channel is reversed	Reverse throttle channel on transmitter
	Motor disconnected from ESC	Make sure motor is connected to the ESC
Extra propeller noise or extra vibration	Damaged propeller and spinner, collet or motor	Replace damaged parts
	Propeller is out of balance	Balance or replace propeller
	Prop nut is too loose	Tighten the prop nut
	Spinner is not tight or fully seated in place	Tighten the spinner or remove the spinner and turn it 180 degrees
Reduced flight time or aircraft underpowered	Flight battery charge is low	Completely recharge flight battery
	Propeller installed backwards	Install propeller with numbers facing forward
	Flight battery damaged	Replace flight battery and follow flight battery instructions
	Flight conditions may be too cold	Make sure battery is warm before use
	Battery capacity too low for flight conditions	Replace battery or use a larger capacity battery
Aircraft will not Bind (during binding) to transmitter	Transmitter too near aircraft during binding process	Move powered transmitter a few feet from aircraft, disconnect and reconnect flight battery to aircraft
	Aircraft or transmitter is too close to large metal object, wireless source or another transmitter	Move aircraft and transmitter to another location and attempt binding again
	The bind plug is not installed correctly in the bind port	Install bind plug in bind port and bind the aircraft to the transmitter
	Flight battery/transmitter battery charge is too low	Replace/recharge batteries
	Bind switch or button not held long enough during bind process	Power off transmitter and repeat bind process. Hold transmitter bind button or switch until receiver is bound
	ESC is powered off	Power on the ESC switch
Aircraft will not connect (after binding) to transmitter	Transmitter too near aircraft during connecting process	Move powered transmitter a few feet from aircraft, disconnect and reconnect flight battery to aircraft
	Aircraft or transmitter is too close to large metal object, wireless source or another transmitter	Move aircraft and transmitter to another location and attempt connecting again
	Bind plug left installed in bind port	Rebind transmitter to the aircraft and remove the bind plug before cycling power
	Aircraft bound to different model memory (ModelMatch™ radios only)	Select correct model memory on transmitter
	Flight battery/Transmitter battery charge is too low	Replace/recharge batteries
	Transmitter may have been bound to a different aircraft using different DSM protocol	Bind aircraft to transmitter
	ESC is powered off	Power on the ESC switch
Control surface does not move	Control surface, control horn, linkage or servo damage	Replace or repair damaged parts and adjust controls
	Wire damaged or connections loose	Do a check of wires and connections, connect or replace as needed
	Transmitter is not bound correctly or the incorrect airplanes was selected	Re-bind or select correct airplanes in transmitter
	Flight battery charge is low	Fully recharge flight battery
	BEC (Battery Elimination Circuit) of the ESC is damaged	Replace ESC
	ESC is powered off	Power on the ESC switch
Controls reversed	Transmitter settings are reversed	Perform the Control Direction Test and adjust the controls on transmitter appropriately
Motor power pulses then motor loses power	ESC uses default soft Low Voltage Cutoff (LVC)	Recharge flight battery or replace battery that is no longer performing
	Weather conditions might be too cold	Postpone flight until weather is warmer
	Battery is old, worn out, or damaged	Replace battery
	Battery C rating might be too small	Use recommended battery

Limited Warranty

What this Warranty Covers
Horizon Hobby, Inc. ("Horizon") warrants to the original purchaser that the product purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase.

What is Not Covered
This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the Product, (iv) attempted service by anyone other than a Horizon Hobby authorized service center, (v) Product not purchased from an authorized Horizon dealer, or (vi) Product not compliant with applicable technical regulations.

OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

Purchaser's Remedy
Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any Product determined by Horizon to be defective. Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

Limitation of Liability
HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.

Law
These terms are governed by Illinois law (without regard to conflict of law principals). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Horizon reserves the right to change or modify this warranty at any time without notice.

WARRANTY SERVICES
Questions, Assistance, and Services
Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product has been started, you must contact your local distributor or Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please visit our website at www.horizonhobby.com, submit a Product Support Inquiry, or call the toll free telephone number referenced in the Warranty and Service Contact Information section to speak with a Product Support representative.

Inspection or Services
If this Product needs to be inspected or serviced and is compliant in the country you live and use the Product in, please use the Horizon Online Service Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. An Online Service Request is available at http://www.horizonhobby.com/content/_service-center_render-service-center. If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

NOTICE: Do not ship LiPo batteries to Horizon. If you have any issue with a LiPo battery, please contact the appropriate Horizon Product Support office.

Warranty Requirements
For Warranty consideration, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Horizon.

Non-Warranty Service
Should your service not be covered by warranty, service will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for service you are agreeing to payment of the service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashier's checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for service, you are agreeing to Horizon's Terms and Conditions found on our website http://www.horizonhobby.com/content/_service-center_render-service-center.

ATTENTION: Horizon service is limited to Product compliant in the country of use and ownership. If received, a non-compliant Product will not be serviced. Further, the sender will be responsible for arranging return shipment of the un-serviced Product, through a carrier of the sender's choice and at the sender's expense. Horizon will hold non-compliant Product for a period of 60 days from notification, after which it will be discarded.

Contact Information

Country of Purchase	Horizon Hobby	Phone Number/Email Address	Address
United States of America	Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/RequestForm/	4105 Fieldstone Rd Champaign, Illinois, 61822 USA
	Horizon Product Support (Product Technical Assistance)	www.quickbase.com/db/bghj7ey8c?a=GenNewRecord 888-959-2305	
	Sales	sales@horizonhobby.com 888-959-2305	
United Kingdom	Service/Parts/Sales: Horizon Hobby Limited	sales@horizonhobby.co.uk +44 (0) 1279 641 097	Units 1–4 , Ployters Rd, Staple Tye Harlow, Essex, CM18 7NS, United Kingdom
Germany	Horizon Technischer Service Sales: Horizon Hobby GmbH	service@horizonhobby.de +49 (0) 4121 2655 100	Christian-Junge-Straße 1 25337 Elmshorn, Germany
France	Service/Parts/Sales: Horizon Hobby SAS	infofrance@horizonhobby.com +33 (0) 1 60 18 34 90	11 Rue Georges Charpak 77127 Lieusaint, France
China	Service/Parts/Sales: Horizon Hobby – China	info@horizonhobby.com.cn +86 (021) 5180 9868	Room 506, No. 97 Changshou Rd. Shanghai, China 200060

FCC Information

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400GHz to 2.4835GHz frequency range.

Compliance Information for the European Union

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)
No. HH2013112103

Product(s): EFL CZ Yak 54 3X BNF Basic
Item Number(s): EFL10550
Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC and EMC Directive 2004/108/EC:

EN 301 489-1 V1.9.2: 2012
EN301 489-17 V2.1.1: 2009

EN55022:2010 + AC:2011
EN55024:2010

CE

Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
Nov 21, 2013

Robert Peak
Chief Financial Officer
Horizon Hobby, Inc

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)
No. HH2013112104

Product(s): EFL CZ Yak 54 3X PNP
Item Number(s): EFL10575
Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the EMC Directive 2004/108/EC:

EN55022:2010 + AC:2011
EN55024:2010

CE

Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
Nov 21, 2013

Robert Peak
Chief Financial Officer
Horizon Hobby, Inc

Instructions for disposal of WEEE by users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

Informazioni sulla conformità per l'Unione Europea

Dichiarazione di conformità

(in conformità con ISO/IEC 17050-1))
No. HH2013112103

Prodotto(i): EFL CZ Yak 54 3X BNF Basic
Codice componente: EFL10550
Classe dei dispositivi: 1

L'oggetto della dichiarazione di cui sopra è conforme ai requisiti delle specifiche elencate qui di seguito, secondo le disposizioni delle direttive europee R&TTE 1999/5/EC e EMC 2004/108/EC:

EN 301 489-1 V1.9.2: 2012
EN301 489-17 V2.1.1: 2009

EN55022:2010 + AC:2011
EN55024:2010

CE

Firmato a nome e per conto di:
Horizon Hobby Inc.
Champaign IL USA
21 novembre 2013

Robert Peak
Chief Financial Officer
Horizon Hobby, Inc

Dichiarazione di conformità

(in conformità con ISO/IEC 17050-1))
No. HH2013112104

Prodotto(i): EFL CZ Yak 54 3X PNP
Codice componente: EFL10575
Classe dei dispositivi: 1

L'oggetto della dichiarazione di cui sopra è conforme ai requisiti delle specifiche elencate qui di seguito, secondo le disposizioni della direttiva europea EMC 2004/108/EC:

EN55022:2010 + AC:2011
EN55024:2010

CE

Firmato a nome e per conto di:
Horizon Hobby Inc.
Champaign IL USA
21 novembre 2013

Robert Peak
Chief Financial Officer
Horizon Hobby, Inc

Istruzioni per lo smaltimento RAEE da parte degli utenti dell'Unione Europea

Questo prodotto non deve essere smaltito assieme ai rifiuti domestici. Al contrario, l'utente è responsabile dello smaltimento di tali rifiuti, che devono essere portati in un centro di raccolta designato per il riciclaggio di rifiuti elettrici e apparecchiature elettroniche. La raccolta differenziata e il riciclaggio di tali rifiuti provenienti da apparecchiature, nel momento dello smaltimento aiuteranno a preservare le risorse naturali e garantiranno un riciclaggio adatto a proteggere il benessere dell'uomo e dell'ambiente. Per maggiori informazioni sui centri di raccolta, contattare il proprio ufficio locale, il servizio di smaltimento rifiuti o il negozio presso il quale è stato acquistato il prodotto.

Replacement Parts • Ersatzteile • Pièces de rechange • Pezzi di ricambio

Part # I Nummer Numéro I Codice	Description	Beschreibung	Description	Descrizione
EFL1055001	Fuselage: C-Z Yak 54 3X	E-flite C-Z Yak 54 3X: Rumpf	C-Z Yak 54 3X -Fuselage	Fusoliera: C-Z Yak 54 3X
EFL1055002	Left Wing: C-Z Yak 54 3X	E-flite Carbon-Z Yak 54 3X: Tragfläche links	C-Z Yak 54 3X -Aile gauche	Ala sinistra: C-Z Yak 54 3X
EFL1055003	Right Wing: C-Z Yak 54 3X	E-flite Carbon-Z Yak 54 3X: Tragfläche rechts	C-Z Yak 54 3X -Aile droite	Ala destra: C-Z Yak 54 3X
EFL1055004	Stab Set: C-Z Yak 54 3X	E-flite C-Z Yak 54 3X: Höhenruderset	C-Z Yak 54 3X -Train d'atterrissage	Set stabilizzatore: C-Z Yak 54 3X
EFL1055005	Rudder: C-Z Yak 54 3X	E-flite C-Z Yak 54 3X: Seitenruder	C-Z Yak 54 3X -Dérive	Timone: C-Z Yak 54 3X
EFL1055006	Hatch Set: C-Z Yak 54 3X	E-flite Carbon-Z Yak 54 3X: Haubenset	C-Z Yak 54 3X - Set de trappes	Set portello: C-Z Yak 54 3X
EFL1055007	Main Landing Gear: C-Z Yak 54 3X	E-flite Carbon-Z Yak 54 3X: Hauptfahrwerk	C-Z Yak 54 3X - Train d'atterrissage	Carrello principale: C-Z Yak 54 3X
EFL1055008	Canopy: C-Z Yak 54 3X	E-flite Carbon-Z Yak 54 3X: Kabinenhaube	C-Z Yak 54 3X - Verrière	Capottina: C-Z Yak 54 3X
EFL1055009	Screw Set: C-Z Yak 54 3X	E-flite Carbon-Z Yak 54 3X: Schraubenset	C-Z Yak 54 3X - Set de vis	Set viti: C-Z Yak 54 3X
EFL1055010	Decal Sheet: C-Z Yak 54 3X	E-flite C-Z Yak 54 3X: Dekorbogen	C-Z Yak 54 3X -Set d'autocollants	Set adesivi: C-Z Yak 54 3X
EFL1008010	Wheel Pants: Yak 54 C-Z	E-flite Carbon-Z Yak 54 3X:Radschuhe	C-Z Yak 54 3X - Carénages de roues	Carenature ruote: Yak 54 C-Z
EFL1008011	Pushrod w/Clevis: Yak 54 C-Z	E-flite Gestänge m/Gabelköpfe: Yak 54 C-Z	C-Z Yak 54 3X - Tringleries avec chapes	Rinvii c/forcelle: Yak 54 C-Z
EFLP12525EV2	12x5.25 Electric Propeller	Elektro Propeller 12x5.25	Hélice 12x5.25 électrique	12x5.25 Elica per elettrico

Part # I Nummer Numéro I Codice	Description	Beschreibung	Description	Descrizione
EFL1008012	Wing Tube: Yak 54 C-Z	E-flite Flächenverbinder: Yak 54 C-Z	C-Z Yak 54 3X - Clé d'aile	Tubo ala: Yak 54 C-Z
EFL1008013	Stab Tube: Yak 54 C-Z	E-flite Höhenleitwerksverbinder: Yak 54 C-Z	C-Z Yak 54 3X - Clé de stabilisateur	Tubo stabilizzatore: Yak 54 C-Z
EFL1008014	Pilot: Yak 54 C-Z	E-flite Pilot: Yak 54 C-Z	C-Z Yak 54 3X - Pilote	Pilota: Yak 54 C-Z
EFL1008017	Landing Gear Fairing: Yak 54 C-Z	E-flite Fahrwerksverkleidung : Yak 54 C-Z	C-Z Yak 54 3X - Habillages de train	Carenature carrello: Yak 54 C-Z
EFL1008018	Main Wheels: Yak 54 C-Z	E-flite Fahrwerksräder: Yak 54 C-Z	C-Z Yak 54 3X - Roues principales	Ruote principali: Yak 54 C-Z
EFL1008019	Tail Wheel Set: Yak 54 C-Z	E-flite Spornrad Set: Yak 54 C-Z	C-Z Yak 54 3X - Roulette de queue	Set ruotino coda: Yak 54 C-Z
EFL1008021	Servo Arm: Yak 54 C-Z	E-flite Servo Arm: Yak 54 C-Z	C-Z Yak 54 3X - Bras de servos	Bracci servi: Yak 54 C-Z
EFL1008023	Servo Extension Set, Aileron, ESC, & Tail: Yak 54 C-Z	E-flite Servo Verlängerungsset Querruder, Regler Leitwerk :Yak 54 C-Z	C-Z Yak 54 3X - Set de rallonges de servos (Ailerons, contrôleur et empennages)	Set prolunghe servi, alettoni, ESC e timone: Yak 54 C-Z
EFL1008024	Motor Mount w/Screws (V2): Yak 54 C-Z	E-flite Motorträger mit Schrauben: Yak 54 C-Z	C-Z Yak 54 3X - Support moteur V2 avec vis	Supporto motore c/viti: Yak 54 C-Z
EFLM7302	Prop Adapter: Yak 54	E-flite Prop. Adapter: Yak 54	C-Z Yak 54 3X - Adaptateur d'hélice	Adattatore elica: Yak 54
EFLM7301	Motor Shaft: BL25 Outrunner	E-flite Motor Welle : BL25 Outrunner	Moteur BL25 - Axe	Albero motore: BL25 cassa rotante
EFLM7300	BL25 Brushless Outrunner Motor, 1000 Kv	E-flite BL25 Brushless Außenläufer Motor, 1000 Kv	Moteur BL 25 brushless 1000Kv à cage tournante.	BL25 motore brushless a cassa rotante, 1000 Kv
EFL1025011	Spinner: Carbon-Z Splendor	E-flite Carbon-Z Splendor Spinner	Carbon-Z Splendor -Cône	Ogiva: Carbon-Z Splendor
EFLA1060B	60-Amp Pro Switch-Mode BEC Brushless ESC (V2)	E-flite 60-Amp Pro Switch-Mode BEC Brushless Regler (V2)	Contrôleur brushless 60A Pro switch Mode BEC (V2)	60-Amp Pro Switch-Mode BEC Brushless ESC (V2)
SPMAR635	Spektrum 6-Channel AS3X Sport Receiver	Spektrum 6 Kanal AS3X Sport Empfänger	Récepteur Spektrum 6 voies à la technologie AS3X	Ricevitore Spektrum 6-canali AS3X Sport
EFLR7155	13 g Digital MG Micro Servo	E-flite 13g Digital MG Micro Servo	Micro servo digital 13g à pignons métal	13 g Digital MG Micro Servo

Optional Parts • Optionale Bauteile • Pièces optionnelles • Pezzi opzionali

Part # I Nummer Numéro I Codice	Description	Beschreibung	Description	Descrizione
EFLB28004S30	E-flite 4S 14.8V 2800mAh 30C Li-Po Battery Pack, 12AWG EC3	E-flite 2800mAh 4S 14.8V 30C LiPo, 12AWG EC3	Batterie Li-Po E-flite 14.8V 4S 2800mA 30C, prise EC3	Batteria E-flite 4S 14.8V 2800mAh 30C Li-Po, 12AWG EC3
EFLB32004S30	E-flite 4S 14.8V 3200mAh 30C Li-Po Battery Pack, 12AWG EC3	E-flite 3200mAh 4S 14.8V 30C LiPo, 12AWG EC3	Batterie Li-Po E-flite 14.8V 4S 32000mA 30C, prise EC3	Batteria E-flite 4S 14.8V 3200mAh 30C Li-Po, 12AWG EC3
EFLB33004S50	E-flite 4S 14.8V 3300mAh 50C Li-Po Battery Pack, 12AWG EC3	E-flite 3300mAh 4S 14.8V 50C LiPo, 12AWG EC3	Batterie Li-Po E-flite 14.8V 4S 3300mA 50C, prise EC3	Batteria E-flite 4S 14.8V 3300mAh 50C Li-Po, 12AWG EC3
EFLAEC302	EC3 Battery Connector, Female (2)	EC3 Akkukabel, Buchse (2)	Prise EC3 femelle (2pc)	EC3 Connettore femmina x batteria (2)
EFLAEC303	EC3 Device/Battery Connector, Male/Female	EC3 Kabelsatz, Stecker/Buchse	Prise EC3 male/femelle	EC3 Connettore batteria maschio/femmina
EFLA261	Micro/Mini Heli Tool Assortment	Micro/Mini-Helikopter-Werkzeugsatz	Assortiment d'outils micro / mini pour hélicoptère	Assortimento utensili per micro/mini elicotteri
RVO1005	Ball Link Pliers	Revolution: Kugelkopfzange	Pince pour rotules	Pinze per attacchi a sfera
EFLA111	Li-Po Cell Voltage Checker	Li-Po Cell Voltage Checker	Testeur de tension d'éléments Li-Po	Voltmetro verifica batterie LiPo
DYN1405	Li-Po Charge Protection Bag, Large	Dynamite LiPoCharge Protection Bag groß	Sac de charge Li-Po, grand modèle.	Sacchetto grande di protezione per carica LiPo
	DX6i DSMX 6-Channel Transmitter	Spektrum DX6i DSMX 6-Kanal Sender	Emetteur DX6i DSMX 6 voies	DX6i DSMX Trasmettitore 6 canali
	DX7s DSMX 7-Channel Transmitter	Spektrum DX7s DSMX 7 Kanal Sender	Emetteur DX7s DSMX 7 voies	DX7s DSMX Trasmettitore 7 canali
	DX8 DSMX 8-Channel Transmitter	Spektrum DX8 DSMX 8 Kanal Sender	Emetteur DX8 DSMX 8 voies	DX8 DSMX Trasmettitore 8 canali
	DX9 DSMX 9-Channel Transmitter	Spektrum DX9 DSMX 9 Kanal Sender	Emetteur DX9 DSMX 9 voies	DX9 DSMX Trasmettitore 9 canali
	DX10t DSMX 10-Channel Transmitter	Spektrum DX10t DSMX 10 Kanal Sender	Emetteur DX10t DSMX 10 voies	DX10t DSMX Trasmettitore 10 canali
	DX18 DSMX 18-Channel Transmitter	Spektrum DX18 DSMX 18 Kanal Sender	Emetteur DX18 DSMX 18 voies	DX18 DSMX Trasmettitore 18 canali

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US 8,201,776. Other patents pending.

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